

DRAFT

Manufacturing Technicians

What They Do

Manufacturing Technicians help produce and package products. They operate and maintain a variety of manufacturing machines and equipment, making sure they work well and operate correctly. They read dials and meters to verify equipment functions according to specifications. They clean, lubricate, connect, install, replace, or make minor adjustments or repairs to hoses, pumps, filters, or screens to maintain processing equipment, using hand tools. They order enough raw materials to ensure an adequate supply.

Technicians follow standard operating procedures to prepare a product. They may be responsible for inventory, weighing and measuring raw materials, and distributing them to the right machine at the right time. They mix ingredients according to specifications. They use a computer to keep detailed records of the production process to ensure compliance with federal regulations. They may write standard operating procedures and assist with product sampling. They maintain logs of instrument readings, test results, and shift production. They may have to work in special clothing in a "clean room" environment.

*Manufacturing Technicians in the biotech industry combine characteristics of Team Assembler; Separating, Filtering, Clarifying, Precipitating and Still Machine Setters, Operators and Tenders; Crushing, Grinding and Polishing Machine Setters, Operators and Tenders; Extruding, Forming, Pressing, and Compacting Machine Setters, Operators and Tenders; and Other Production Workers. Detailed descriptions of these occupations may be found in the Occupational Information Network (O*NET) at online.onetcenter.org.*

Important skills, knowledge and abilities include:

- ▶ Ability to maintain accurate records.
- ▶ Reading comprehension to understand technical manuals.
- ▶ Familiarity with regulatory requirements and standard operating procedures.
- ▶ Ability to use basic math to collect data and perform calculations.
- ▶ Ability to document processes and troubleshoot problems.
- ▶ Physical strength and endurance.
- ▶ Knowledge of chemistry, biology, and physics.

Training/Requirements

- ▶ High school diploma or associate degree in biotechnology or related health sciences field.
- ▶ Several years of experience in sterile manufacturing environment preferred.

What's the California Job Outlook?

While the Bureau of Labor Statistics does not collect data on Manufacturing Technicians, the occupations listed below are found in the biotechnology industry and have similar duties to Manufacturing Technicians. The California outlook and wages in the figures below represent the occupations across all industries.

Standard Occupational Classification	Estimated Number of Workers 2000	Estimated Number of Workers 2010	Average Annual Openings	Wage Range (per hour)
Team Assemblers				
51-2092	133,600	140,300	3,700	\$8.10 to \$12.88
Separating, Filtering, Clarifying, Precipitating and Still Machine Setters, Operators and Tenders				
51-9012	5,200	6,300	250	\$11.24 to \$18.39
Crushing, Grinding and Polishing Machine Setters, Operators and Tenders				
51-9021	3,300	3,700	120	\$9.10 to \$15.62
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators and Tenders				
51-9041	5,800	6,700	230	\$8.69 to \$14.96
All Other Production Workers				
51-9199	6,400	8,900	430	\$7.60 to \$11.96

These figures do not include self-employment.

Source: www.calmis.ca.gov, *Employment Projections by Occupation and OES Employment & Wages by Occupation*, Labor Market Information Division, Employment Development Department.

Additional Sources of Information

National Association of Manufacturers
(202) 637-3000
<http://www.nam.org/secondary.asp?TrackID=&CategoryID=582>

National Center for Manufacturing Sciences
(734) 995-0300
<http://www.ncms.org/home/search.htm>